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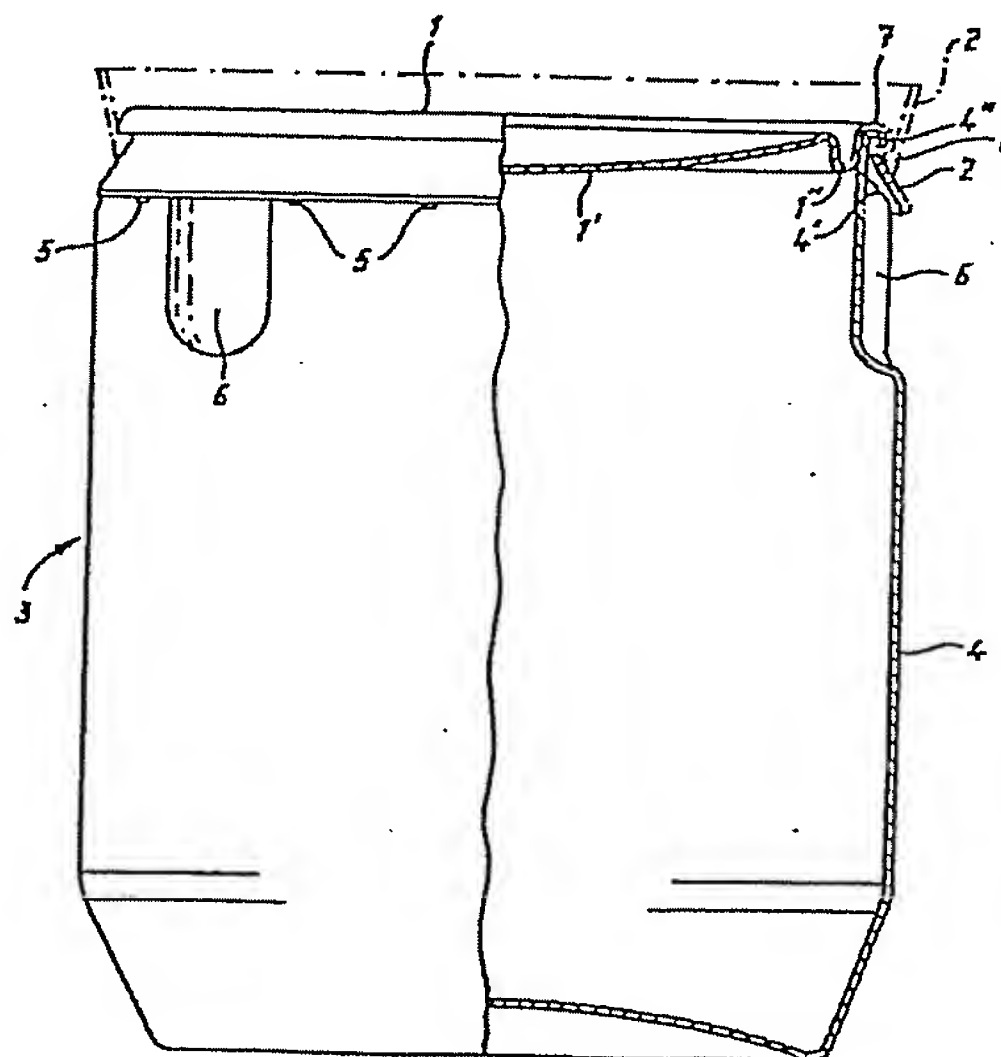
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⑤④ Container with a closure releasably locked thereon.

⑤⑦ A container (3) with a closure (1) which is releasably locked on its open top side, the container being provided with a radially displaced outwardly and downwardly extending annular lip (2) and said closure having an annular portion which is in contact with a portion of said annular lip and annular shoulder means in engagement with the end of said lip in the locked condition of the closure, an annular bending lip being provided which extends from said shoulder means and which is movable between a downwardly and upwardly deflected condition to form a leverage system for pivoting said shoulder means about the end of the annular lip of the container in the delivered container closed by the closure so that the bending lip (2) is in the downwardly deflected, the closure locking condition, the closure having breakable means which retain the bending lip in said condition with respect to the container. Preferably at least one depression (6) is formed in the wall of the container so that the user of the container will be able to put one of his fingers behind the bending lip to lift said lip whereby the fixing means (5) are broken.



Container with a closure releasably locked thereon.

The invention relates to a container with a closure which is releasably locked on its open top side, the container being provided along the circumference of its open top side with a radially displaced outwardly and downwardly extending annular lip and said closure having an
5 annular portion which is in contact with a portion of said annular lip and ^{annular} shoulder means integral with said annular portion and in engagement with the end of said lip in the locked condition of the closure, an annular bending lip being provided which extends from said shoulder means and which is movable between a downwardly and
10 upwardly deflected condition, which bending lip forms a leverage system for pivoting said shoulder means about the end of the annular lip of the container so that in the downwardly deflected condition of said bending lip in which the closure is locked, said shoulder means is in engagement with the end of the annular lip and in its
15 upwardly deflected condition said shoulder means is out of engagement with the end of said lip so that the closure may be removed from the container, said bending lip including an annular continuous portion for retaining said bending lip and shoulder means in both said conditions. Such a container is known from US patent specification
20 4676493.

Such a container serves in particular for packaging articles of food, drinks such as beer or limonade and similar matter.

The known container is delivered in filled condition and closed by
25 the locked closure, in which condition the bending lip is in the downwardly deflected condition in order to lock the closure on the container, but may readily be deflected upwardly so that the closure may be taken off and the contents of the container becomes assessable after which the closure can be put on the container again and the
30 bending ^{lip} be deflected downwardly so that the container seen from the outside is again in the original condition.

This is a disadvantage of the known container since the customers for

instance buyers in a self-service shop in which the filled and closed containers are displayed can never be sure that the container has not been opened once either accidentally or maliciously so that the contents may be gone bad or partially removed.

- 5 The object of the invention is to provide a container having a closure of the afore mentioned type which is not suffering from said disadvantage.

10 This object is attained in that according to the invention, in the delivered container closed by the closure so that the bending lip is in the downwardly deflected, the closure locking condition, the closure as breakable means which retain the bending lip in said condition with respect to the container so that said means form in undamaged condition a security for the customer or user that the
15 container never has been opened after having been delivered.

Preferably in the delivered container according to the invention the bending lip in its downwardly deflected condition engages at least partially the outside of the container wall and is attached therewith by means of breakable fixing means.

20 In order to be able to remove the closure from the container for which the bending lip has to be deflected upwardly in breaking the fixing means, and to facilitate this movement of the bending lip, at least one depression is formed in the wall of the container near its upper side so that the user of the container by inserting
25 at least one finger into the depression will be able to put this finger behind the bending lip and lift said lip whereby the fixing means are broken and the bending lip may be taken in the upwardly deflected condition for removing the closure.

30 In a closure in which its bending lip extends obliquely downwardly in the downwardly deflected condition, according to the invention the wall of the container has advantageously near its open top end a portion extending conically inwardly in upward direction, the
35 bending lip being attached to said conical portion near the point

where said conical portion merges in the remaining portion of the wall of the container.

Preferably the bending lip is attached to the wall of the container by means of spot welding, said depression in the wall of the container
5 being positioned between two spot welds.

Thus according to the invention a container having a closure releasably locked on its open top side is obtained which in delivered condition has a security for not being opened previously so that the contents
10 of the container is the real original contents. Moreover, when the security means are not damaged it is guaranteed that the lip along the open upper side of the container is not dirty since said lip is protected by the annular portion of the closure which is in contact therewith so that after having removed the closure one may drink
15 directly from the container without endangering the health of the drinker.

The invention will be described in more detail by referring to the drawing in which a container according to the invention is shown in the left hand portion in elevation and in the right hand portion in
20 longitudinal cross section.

As shown in the drawing on a container 3, on its open top side a closure 1 is locked. The cylindrical wall 4 of the container 3 merges near the top side in a portion 4' extending conically inwardly,
25 which conical wall portion extends through a relative short cylindrical portion in an annular lip 4'' directed radially outwardly and downwardly.

The closure 1 comprises a dish-shaped main portion 1' which is surrounded by a flange-shaped portion 1'' bent downwardly, which
30 portion 1'' engages said relative short cylindrical portion of the wall 4 of the container 3. Further the closure has an annular portion 7 which is in contact with a portion of the annular lip 4'' of the container and which merges in an annular shoulder 8 which engages the end of lip 4'' whereby the closure 1
35 is locked on container 3. An annular bending lip 2 extends from shoulder 8 which bending lip is attached to the wall 4 of the container

3 by means of spot welds 5.

Further a plurality of depressions 6 are formed in wall 4 of the container 3 ^{of} which each is positioned between two spot welds 5.

- 5 The container 3 closed by means of closure 1 is delivered in the condition shown in the figure so that when the welds 5 are not damaged it is guaranteed that the closure 1 has never been opened after the container has been delivered.
- 10 When a customer wishes to open the container a finger is inserted in a depression 6 until said finger is situated behind the bending lip 2 whereafter said lip is bent upwardly so that the spot welds 5 collapse. The bending lip 2 is then deflected further upwardly to the position shown in dotted lines whereby shoulder 8 is out of engagement
- 15 with the end of lip 4'' and the closure 1 may be taken off the container 3. Thereafter the closure 1 can be put on container 3 again and the bending lip 2 may be deflected downwardly again so that the closure 1 is locked again on container 3.
- 20 From the drawing appears clearly that in the delivered condition the entire upper portion of the container 3 including conical wall portion 4' and lip 4'' is covered by the bending lip 2, the shoulder 8 and the annular portion 7 of closure 1 with respect to the environment so that after having removed the closure 1 from the container 3 for the first
- 25 time said upper portion is clean and one may drink directly from container 3. Preferably container 3 as well as the closure 1 are made from a plastic material.

30 The welds 5 may be obtained for instance by heat-, ultrasonic-, friction- and/or laser welding whereas it is also possible to stick the bending lip 2 to the wall of container 3.

Claims

1. A container with a closure which is releasably locked on its open top side, the container being provided along the circumference of its open top side with a radially displaced outwardly and downwardly extending annular lip and said closure having an
5 annular portion which is in contact with a portion of said annular lip and annular shoulder means integral with said annular portion and in engagement with the end of said lip in the locked condition of the closure, an annular bending lip being provided which extends from said shoulder means and which is movable between a downwardly
10 and upwardly deflected condition, which bending lip forms a leverage system for pivoting said shoulder means about the end of the annular lip of the container so that in the downwardly deflected condition of said bending lip in which the closure is locked, said shoulder means is in engagement with the end of the annular lip and in its
15 upwardly deflected condition said shoulder means is out of engagement with the end of said lip so that the closure may be removed from the container, said bending lip including an annular continuous portion for retaining said bending lip and shoulder means in both said conditions, characterized in that in the delivered container closed
20 by the closure so that the bending lip is in the downwardly deflected, the closure locking condition, the closure has breakable means which retain the bending lip in said condition with respect to the container so that said means form in undamaged condition a security for the customer or user that the container never has been opened after
25 having been delivered.

2. Container according to claim 1, characterized in that in the delivered container the bending lip in its downwardly deflected condition engages at least partially the outside of the container wall and is attached therewith by means of breakable
30 fixing means.

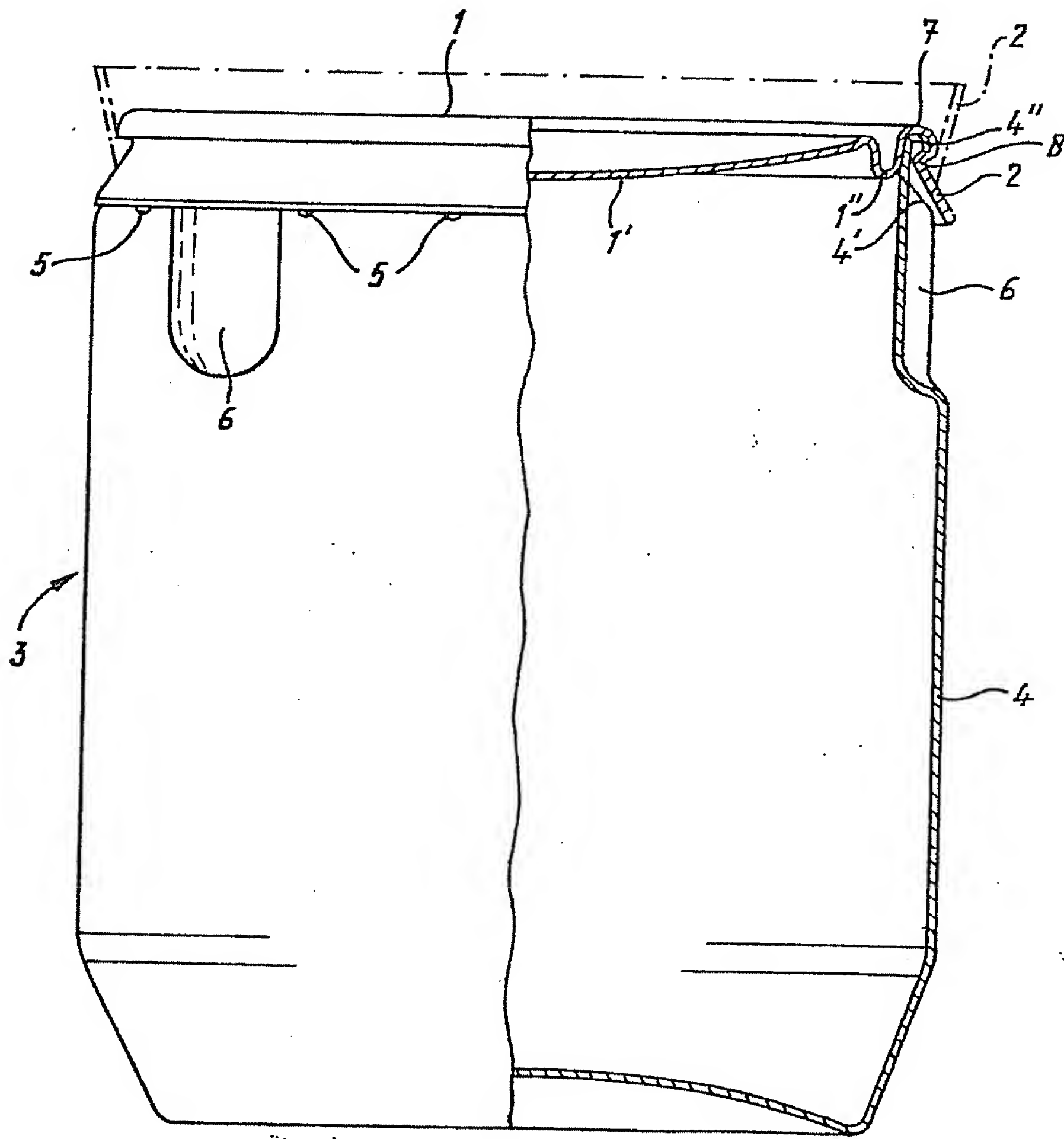
3. Container according to claims 2, characterized in that

at least one depression is formed in the wall of the container near its upper side so that the user of the container by inserting at least one finger into the depression will be able to put this finger behind the bending lip and lift said lip whereby the fixing
5 means are broken and the bending lip may be taken in the upwardly deflected condition for removing the closure.

4. Container according to claims 2 or 3, in which its bending lip extends obliquely downwardly in the downwardly deflected condition, characterized in that the wall of the container has near
10 its open top end a portion extending conically inwardly in upward direction, the bending lip being attached to said conical portion near the point where said conical portion merges in the remaining portion of the wall of the container.

5. Container according to claims 2-4, characterized in that
15 the bending lip is attached to the wall of the container by means of spot welding.

6. Container according to claims 3-5, characterized in that said depression is positioned between two spot welds.





European Patent
Office

EUROPEAN SEARCH REPORT

0176159
Application number

EP 85 20 1550

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.4)
X	FR-A- 828 967 (FREEMAN) * Page 2, lines 37-67; figures 1-3 *	1,2	B 65 D 43/06 B 65 D 43/10
Y		4	
Y	EP-A-0 044 112 (TETRA-PAK) * Page 7, lines 16-34; page 8, lines 1-17; figures 1-7 *	4	
A,D	EP-A-0 048 472 (SEARS) * Page 15, lines 1-19; figures 1-3 *	1	
A	US-A-3 797 730 (ZACH) * Column 3, lines 14-30; figures *	3	
			TECHNICAL FIELDS SEARCHED (Int. Cl.4)
			B 65 D
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 04-12-1985	Examiner GOETZ P.A.
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	